

**REMARKS**

**I. INTRODUCTION**

Claims 22-32 have been added, and claims 17 and 19-21 have been amended herein above. Claims 1-16 were previously cancelled, without prejudice. Accordingly, claims 17-32 are now under consideration in the present application.

Provided above, please find a claim listing indicating the claim additions, claim amendments and current status of the claims on separate sheets so as to comply with the requirements set forth in 37 C.F.R. § 1.121. It is respectfully submitted that no new matter has been added.

**II. REJECTIONS UNDER 35 U.S.C. § 103(a) SHOULD BE WITHDRAWN**

Claims 17, 20 and 21 stand finally rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over U.S. Patent No. 6,813,749 issued to Rassaian et al. (hereinafter “Rassaian”), in view of U.S. Patent No. 6,246,410 issued to Bergeron et al. (hereinafter “Bergeron”). Claims 18 and 19 stand finally rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Rassaian in view of Bergeron, and further in view of U.S. Patent No. 6,330,670 issued to England et al. (hereinafter “England”).

Applicants respectfully assert that the combination of Rassaian and Bergeron, even if combined with England, fails to teach or suggest the subject matter recited in amended independent claims 17 and 19-21, and the claims which depend therefrom, for at least the reasons provided herein below.

“To reject claims in an application under Section 103, an examiner must show an unrebutted *prima facie* case of obviousness.” *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455

(Fed. Cir. 1998). The Supreme Court in *Graham v. John Deere*, 383 U.S. 1, 148 USPQ 459 (1966), stated:

Under Section 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined.

Indeed, to sustain a rejection under 35 U.S.C. § 103(a), there must be some teaching, other than the instant application, to alter the prior art to arrive at the claimed invention. “The problem confronted by the inventor must be considered in determining whether it would have been obvious to combine the references in order to solve the problem.”

*Diversitech Corp. v. Century Steps, Inc.*, 850 F.2d 675, 679 (Fed. Cir. 1998).

The objective standard for determining obviousness under 35 U.S.C. § 103, as set forth in *Graham v. John Deere*, Co., 383 U.S. 1 (1966), requires a factual determination to ascertain: (1) the scope and content of the prior art; (2) the level of ordinary skill in the art; and (3) the differences between the claimed subject matter and the prior art. Based on these factual inquiries, it must then be determined, as a matter of law, whether or not the claimed subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the alleged invention was made. *Graham*, 383 U.S. at 17. Courts have held that there must be some suggestion, motivation or teaching of the desirability of making the combination claimed by the applicant (the “TSM test”). See *In re Beattie*, 974 F.2d 1309, 1311-12 (Fed. Cir. 1992). This suggestion or motivation may be derived from the prior art itself, including references or disclosures that are known to be of special interest or importance in the field, or from

the nature of the problem to be solved. *Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1573 (Fed. Cir. 1996).

Although the Supreme Court criticized the Federal Circuit's application of the TSM test, see *KSR International Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741, (2007) the Court also indicated that the TSM test is not inconsistent with the *Graham* analysis recited in the *Graham v. John Deere* decision. *Id.*; see *In re Translogic Technology, Inc.*, No. 2006-1192, 2007 U.S. App. LEXIS 23969, \*21 (October 12, 2007). Further, the Court underscored that "it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does." *KSR*, 127 S. Ct. at 1741. Under the precedent established in *KSR*, however, the presence or absence of a teaching, suggestion, or motivation to make the claimed invention is merely one factor that may be weighed during the obviousness determination. *Id.* Accordingly, the TSM test should be applied from the perspective of a person of ordinary skill in the art and not the patentee, but that person is creative and not an automaton, constrained by a rigid framework. *Id.* at 1742. However, "the reference[s] must be viewed without the benefit of hindsight afforded to the disclosure." *In re Paulsen*, 30 F.3d 1475, 1482 (Fed. Cir. 1994).

The prior art cited in an obviousness determination should create a reasonable expectation, but not an absolute prediction, of success in producing the claimed invention. *In re O'Farrell*, 853 F.2d. 894, 903-04 (Fed. Cir. 1988). Both the suggestion and the expectation of success must be in the prior art, not in applicant's disclosure. *Amgen, Inc. v. Chugai Pharmaceutical Co., Ltd.*, 927 F.2d 1200, 1207 (Fed. Cir. 1991) (citing *In re Dow Chem. Co.*, 837 F.2d 469, 473 (Fed. Cir. 1988)). Further, the implicit

and inherent teachings of a prior art reference may be considered under a Section 103 analysis. See *In re Napier*, 55 F.3d 610, 613 (Fed. Cir. 1995).

Secondary considerations such as commercial success, long-felt but unsolved needs, failure of others, and unexpected results, if present, can also be considered. *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538-39 (Fed. Cir. 1983). Although these factors can be considered, they do not control the obviousness conclusion. *Newell Cos. v. Kenney Mfg. Co.*, 864 F.2d 757, 768 (Fed. Cir. 1988).

To establish obviousness, the prior art references must be evaluated as a whole for what they fairly teach and neither the references' general nor specific teachings may be ignored. *Application of Lundsford*, 357 F.2d. 385, 389-90 (CCPA 1966). A reference must be considered for all that it teaches, not just what purportedly points toward the invention but also that which teaches away from the invention. *Ashland Oil, Inc. v. Delta Resins & Refractories*, 776 F.2d. 281, 296 (Fed. Cir. 1985).

Amended independent claims 17 and 19-21 recite, *inter alia*, an arrangement configured to input, store and/or transmit a material model identification number identifying at least one of a type of material property data, a type of material analysis model, a name of an analysis program or a version thereof. Such subject matter is clearly described in the originally-filed specification. (See, e.g., paragraph [0034] of the specification of the present published application).

Specifically, amended independent claims 17 and 19-21 recite that the material name and the material model identification number identifies a type of material property data. The Examiner, on page 3, lines 1-3, and page 7, lines 6-10 of the Final

Office Action, alleges that the environmental load described in Rassaian teaches or suggests a “type of material property data.”

However, the environmental load described in Rassaian is a thermal load, a vibration load, a shock load, and/or an acoustic load. (See Rassaian, col. 12, lines 16-18). Such environmental load of Rassaian is independent of material property. For example, as described in Rassaian, a thermal environment is merely a temperature profile. (See Rassaian, col. 11, lines 32-34). No **type of material property data** is described in Rassaian, as explicitly recited in amended independent claims 17 and 19-21.

Further, Fig. 7 of Rassaian merely lists elements and the specific values of each particular element. For example, for element “Al”, Rassaian, in Fig. 7 thereof, merely lists numerical values thereof, such as “21.600” for an “Exp Coef”, or “2712.00” for “Density.” As explicitly recited in amended independent claims 17 and 19-21, the material name and the material model identification number specifically identify, e.g., a **type of material property data**. In Rassaian, the name and part number do not provide for an **identification of a type of material property data**, as explicitly recited in amended independent claims 17 and 19-21, but instead provide specific values for the respective element (and not a type of the material property for such element).

Further, Rassaian, taken individually or in combination with Bergeron, does not teach or suggest that a material model identification number identifies a type of a material analysis model, a name of an analysis program or a version thereof, as clearly recited in amended independent claims 17 and 19-21.

The Examiner, on page 3, lines 3-5 and page 7, lines 8-10 of the Final Office Action, alleges that the environmental load described in Rassaian is equivalent to a type of a material model, a name of an analysis program or a version thereof. However, Rassaian, in col. 11, lines 1-4 thereof, only describes a type of parts and the package styles for the parts. This is not a type of material analysis model, as recited in amended independent claims 17 and 19-21 (and described in para. [0034] of the published specification of the present application), or a name of an analysis program or a version thereof. Physical parts and package styles are completely different than a type of material analysis model, which can be (but not limited to) a computer-simulated model, for example, performed for a numerical analysis, and also different from a name of an analysis program.

For example, with amended independent claims 17 and 19-21, it is possible to provide a numerical analysis that can be performed by designating only a material name and its material model identification number by a user so that the user does not have to concern himself or herself with the specific values of the material property data.

Bergeron and/or England do not cure the deficiencies of Rassaian as described above, and the Examiner does not contend that they do.

Accordingly, Applicants respectfully assert that the alleged combination of Rassaian and Bergeron, even if combined with England, fails to teach a material model identification number identifying at least one of a type of material property data, a type of material analysis model, a name of an analysis program or a version thereof, as explicitly recited in amended independent claims 17 and 19-21, and as described in the

specification. (See, e.g., paragraphs [0031]-[0035] of the published application of the present disclosure).

Further, amended independent claim 17 specifically provides that the server-side computing arrangement comprises a fourth arrangement which is configured to store the material name and the material model identification number corresponding to one or more types of a material property data from (a) a mechanical property value, (b) a thermal physical property value, or (c) an electromagnetic property value as for a number of materials. In the Final Office Action, the Examiner alleges that Rassaian, in Fig. 7 and the description thereof, teaches such recitation. (See Final Office Action, p. 3, lines 7-14). However, Fig. 7 of Rassaian merely shows values for various materials. Indeed, there is no description in Rassaian of a material name and a material model identification number that correspond to one or more types of a material property data that are stored on a server-side computing arrangement. In contrast, a storage of elements is provided in Rassaian on a user-side computer arrangement, as clearly indicated in the description of Fig. 7 thereof. (See Rassaian, col. 11, lines 18-21, describing that the user is prompted to specify the material of the part and the parameters of the material as represented in Fig. 7 thereof).

Accordingly, Rassaian, individually or in combination with Bergeron and/or England, does not teach or suggest such further recitation of amended independent claim 17.

Regarding the 35 U.S.C. § 103(a) rejection of claim 18, Applicant respectfully asserts that the combination of Bergeron and Rassaian, even if combined with England, fails to teach or suggest the explicit recitations of amended independent claim 17.

Accordingly, claim 18, which depends from amended independent claim 17, is also patentable over the prior art relied upon by the Examiner at least because these publications fail to teach or suggest the recited features of amended independent claim 17.

Further, claim 18 recites that the server-side computing arrangement further comprises a tenth arrangement configured to avail the material property data to the ninth arrangement and precluding the user from having access thereto when the material property data extracted by the sixth arrangement is transmitted to the user-side computing arrangement. Amended independent claim 19 recites, *inter alia*, a fifth arrangement configured to avail the material property data a numerical analysis arrangement provided in the user-side computing arrangement and unavailable to a user when the material property data extracted by the third arrangement is transmitted to the user-side computing arrangement.

The Examiner admits that Rassaian and Bergeron fail to teach or suggest such recited subject matter, but alleges that England describes such subject matter. (See Final Office Action, p. 12, lines 1-12).

For example, the exemplary embodiments described in the present disclosure of the present application indicate that, e.g., at a server side computer 11, it is possible to provide the material property data only to a specific user by performing an authentication of a user at a time a connection is started. The server side computer 11 can be capable of accepting the connection calls the material property data from a database by using, for example, the material name and the material model identification number as search keys with reference to a reference table 18, based on the requested

material name and material model identification number, to transmit to the user side computer 10 in an appropriate format. (See, e.g., published application, para. [0036], **emphasis added**).

Further, e.g., at a user side computer 10, the numeric value of the received material property data may be displayed to a user in a visible state, and it can enable a reuse (e.g., an unauthorized copy) of the once provided material property data. Consequently, it may be desirable to encrypt the material property data at the server side computer 11, and then transmit to the user side computer 10. In such case, the numerical analysis program 14 can use the encrypted material property data for the analysis by decrypting the data, but it is possible to secure a confidentiality of the data and possibly prevent the reuse of the numeric data by making the data invisible to the user. This is made possible, e.g., by the protection of extracted material property data that is transmitted to a user-side computing arrangement, as recited in claim 18 and amended independent claim 19. (See, e.g., published application, para. [0039], **emphasis added**).

England, on the other hand, merely describes a digital rights management operating system that protects rights-managed data, such as downloaded content, from access by untrusted programs while the data is loaded into memory or on a page file as a result of execution of a trusted application that accesses the memory. (See England, Abstract). However, England does not describe any protection of extracted material property data that is transmitted to the user-side computing arrangement, as recited in claims 18 and amended independent claim 19. Instead, England only describes the protection of access by untrusted programs while data is being loaded into the memory.

Therefore, for at least the reasons as presented herein above, Applicants respectfully request withdrawal of the 35 U.S.C. § 103(a) rejection of claims 17, 20 and 21 as being allegedly unpatentable over Rassaian in view of Bergeron, and withdrawal of the 35 U.S.C. § 103(a) rejection of claims 18 and 19 as being allegedly unpatentable over Rassaian in view of Bergeron, and further in view of England.

**III. NEW CLAIMS 22-32**

New claims 22-32 have been added. Support for the new claims can be found in the originally-filed specification and drawings. It is respectfully requested that a confirmation of patentability of these claims be provided in the next communication for this application to Applicants' representatives.

New claims 22-32 depend from one of amended independent claims 17 and 19-21, and are thus believed to be patentable at least for all the reasons as set forth above with regard to amended independent claims 17 and 19-21.

Further, new claims 22-25 recite that the material model identification number identifies a name of an analysis program. Such subject matter is in no way taught or suggested by Rassaian, taken alone or in combination with Bergeron and/or England.

In addition, new claims 26-28 recite that the server-side computing arrangement is configured to store the material name and the material model identification number corresponding to the one or more types of the material property data from (a) the mechanical property value, (b) the thermal physical property value and/or (c) the electromagnetic property value, as recited in amended independent claim 17. At least based on the arguments as set out above with respect to amended independent claim

17, claims 26-28 are also believed to be patentable over the publications relied on by the Examiner.

Finally, new claims 29-32 recite that the type of material analysis model is at least one of an elastic model, an elasto-plastic model or a visco-plastic model. Support for the claims can be found in, e.g., paragraph [0034] of the published application of the present disclosure. Such subject matter is also not taught or suggested by Rassaian, taken alone or in combination with Bergeron and/or England.

Applicants respectfully request a confirmation that claims 22-32 are allowable in the next communication.

**IV. CONCLUSION**

In light of the foregoing, Applicants respectfully submit that claims 17-32 are in condition for allowance. Prompt consideration, reconsideration and allowance of the present application are therefore earnestly solicited. If any issues remain outstanding, the Examiner is invited to contact the undersigned via the telephone number provided below.

Respectfully submitted,

Date: March 19, 2010

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